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ABSTRACT

Based upon visits to representative educational centers, interviews with area citizens, and a research review, this report assesses the post-secondary educational needs of Australia's Pilbara region and recommends the establishment of two community colleges to meet these needs. A geographic, economic, and demographic profile of the Pilbara precedes a summary of its post-secondary educational demands as reflected in enrollments in para-professional, adult, apprenticeship, and college preparatory courses offered locally by the Technical Education Division (TED) and through correspondence courses. Enrollments in these courses are analyzed in terms of the corridors and towns in which the students live, and the socioeconomic, geographic, and communications factors are discussed which led to the proposal that two colleges, serving two distinct sub-regions, be established. Proposals are presented for the nature of these institutions, including provisions that they remain independent of TED, develop strong counseling services, retain an open-door admissions policy, provide a comprehensive curriculum, and act as community cultural centers. Finally, the report discusses the legislation required to establish the colleges: examines their characteristics in terms of mission, curriculum, staffing, student services, funding, governance, and facilities: and recommends the evaluation of the current apprenticeship system. (JP)

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ED194175

REPORT ON POST SECONDARY EDUCATION IN THE PILBARA

WESTERN AUSTRALIAN POST SECONDARY EDUCATION COMMISSION

JC 800 615

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PLAN OF THE REPORT

The Report is divided into a number of sections as follows -

Introduction (Paragraphs 1 to 7). Details of the background to this study and the procedures adopted by the Commission.

The Pilbara Region (Paragraphs 8 to 18). A description of the region in terms of geography, demography and living and working conditions, with projections of population growth for the years 1976-1986.

Demand for Post Secondary Education (Paragraphs 19 to 23). A summary of the kinds of post secondary courses for which there is a demand, with tables showing enrolments in the different sectors, including the mining companies' training courses.

The Existing Provision of Post Secondary Education (Paragraphs 24 to 51). Details of courses provided locally by the Technical Education Division, and of courses available externally or by correspondence from the Technical Extension Service, the University of Western Australia, Murdoch University, the WA Institute of Technology and Mount Lawley Teachers College, with tables showing the distribution of enrolments in the various courses.

The Sub-Regional Distribution of Post Secondary Education (Paragraphs 52 to 53). An analysis of enrolments at the post secondary institutions and in the various apprentice courses listed in terms of the corridors and towns in which the students live.

The Case for the Provision of Additional Post Secondary Education Facilities (Paragraph 54). An analysis of the arguments in support of the provision of additional post secondary education facilities in the Pilbara, having regard to the difficulties currently experienced by residents, and the needs of various community groups including school leavers and employers.

The Location of Additional Post Secondary Education Facilities (Paragraphs 55 to 58). A discussion of the geographical and communication factors which lead to the proposal that colleges be established at Karratha and Port Hedland.

The Nature of Additional Post Secondary Education Facilities (Paragraphs 59 to to 68). A consideration of the types of institutions which might be established to provide post secondary education in the Pilbara, namely traditional technical colleges, technical colleges administered by the Technical Education Division but having their own governing councils, and colleges which are not under the control of the Technical Education Division, but which are governed by councils composed of members of the local communities. A recommendation that colleges of the third type be established, with a brief discussion of the effects this course would have on the administration of post secondary education in Western Australia.

The Legislative Framework (Paragraphs 69 to 71). A summary of the kind of legislation which would be required to establish colleges of the type proposed.

Characteristics of the Proposed Colleges (Paragraphs 72 to 106). A discussion of the characteristics of the proposed colleges including the scope, objectives and functions; courses; staffing; other services; funding; the constitution, powers and functions of the councils; the nature of the physical facilities including residential accommodation and sites; and the implementation of the proposals.

PLAN OF THE REPORT - Continued

The Nature of the Apprenticeship System (Paragraphs 107 to 110). A recommendation that the apprenticeship system be reviewed to determine whether major structural changes should be made to suit the needs of the Pilbara.

Summary of Recommendations (Paragraph 111).

INTRODUCTION

1. The Partridge Committee on Post Secondary Education in Western Australia recommended the establishment in the near future of technical schools at Karratha and Port Hedland to be planned in such a way as to make possible their early development into community colleges. In making this recommendation the Partridge Committee stated that -

> "Post secondary facilities in the Pilbara are very limited. There is no technical school or business college, and there is need to extend extra-mural studies and adult education classes. The size of population, the large scale of the mining industry, and the importance of apprentice training justify technical schools at both Karratha and Port Hedland. Prospects of future growth make Karratha the first priority.... The technical school should provide the full range of apprentice training needed in the area; residential facilities will be needed for apprentices from other centres. The technical school at Karratha could be the nucleus of the first community college in the Pilbara." (1)

2. The State Government subsequently asked the Commission to undertake an assessment of the post secondary education needs of the North of the State and to recommend a program for the progressive addition of more post secondary education facilities and services in key centres. The Government informed the Commission that, in particular, it was anxious to increase the provision of technical education.

3. In April, 1977 the Commission, by way of press advertisement, invited members of the public to make submissions on a number of issues including the provision of post secondary education in country areas. A number of submissions was received, including some which made specific reference to the Pilbara region. The names of organisations and individuals who made submissions are listed in Appendix A.

4. The Commission's Chairman and Senior Research and Planning Officer visited Dampier, Karratha, Newman, Port Hedland, Roebourne and Wickham in October, 1977 to view facilities and to undertake preliminary discussions with a

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Footnote (1): Report of the Committee of Enquiry into Post-Secondary Education in Western Australia, p.8.

number of interested organisations and individuals.

5. Subsequently, a report on "Post-Secondary Education Needs in the Pilbara", which had been prepared for the Pilbara Regional Development Committee, was submitted by the Minister for Industrial Development to the Minister for Education, who referred the matter to the Commission and the State Education Department for advice. "Post-Secondary Education Needs in the Pilbara" contains much valuable background information, some of which is reproduced in later sections of this report. In addition, Tables 2 to 20 and Figure 1 of this report are based on material contained in "Post Secondary Education Needs in the Pilbara" and on more recent information provided by the Technical Education Division.

6. In early February, 1978 the Commission established a Committee to prepare a draft report on post secondary education in the Pilbara for consideration by the Commission. The Committee visited a representative sample of centres in the Pilbara from 22 to 26 February, 1978. The visit involved tours of facilities and discussions with a wide range of interested organisations and individuals at Dampier, Karratha, Marble Bar, Newman, Paraburdoo, Port Hedland and Tom Price. Included among the people interviewed were representatives of shires, mining companies, trade unions, schools, parents and citizens organisations, service clubs, community organisations, religious organisations and government departments. The visit culminated with a meeting with members of the Pilbara Regional Development Committee. During March and April, 1978 the Committee interviewed a number of people in Perth, including the Director-General of Education and the Acting Director of Technical Education. The Committee also visited the Bunbury Technical College and the Bunbury Advanced Education Centre in order to obtain a better appreciation of the type of post secondary education facilities that have been provided in a country area.

7. The Committee reported to the Commission in June 1978 and the Commission itself has now adopted this final Report on Post Secondary Education in the Pilbara.

THE PILBARA REGION

8. The rapid development of iron ore mining in the Pilbara region has resulted in substantial increases in population, as shown in Table 1 which follows.

TABLE 1

POPULATION OF THE PILBARA STATISTICAL DIVISION - 1961, 1966, 1971 and 1976 CENSUS DATES

Sex \ Year	1961	1966	1971	1976
Male	2119	5547	19385	23267
Female	1124	1836	9600	15420
Total:	3243	7383	28985	38687

SOURCE: Australian Bureau of Statistics. The figures for 1976 have not been adjusted for under-enumeration as measured by the post-enumeration survey and are possibly 2% lower than the actual population as at the 1976 census date.

9. The Pilbara region consists of four shires which have varying degrees of interaction with each other. The map at Appendix B shows the shires and major towns in the area.

10. The Shire of Port Hedland (which includes the town of Port Hedland) has relatively close links with the Shire of East Pilbara (which includes the towns of Marble Bar, Goldsworthy, Shay Gap and Newman). Port Hedland serves as the port for Goldsworthy Mining's operations at Goldsworthy and Shay Gap, and for Mount Newman Mining's operations at Newman.

11. On the other hand, the Shire of Roebourne (which includes the towns of Roebourne, Dampier, Karratha, Point Samson and Wickham) has relatively close links with the Shire of West Pilbara (which includes the towns of Tom Price, Paraburdoo and Pannawonica). Dampier serves as the port for Hamersley Iron's operations at Tom Price and Paraburdoo, and Wickham serves as the port for Cliffs Robe River Iron's operations at Pannawonica.

12. The transport and communication links which have developed between the mining companies' mine sites and the respective ports have resulted in

the creation of what are in effect two economically and socially distinct communities within the Pilbara, the one (the Eastern Corridor) based on Port Hedland, and the other (the Western Corridor) on Karratha. While communication links between the two corridors are generally poor, there are reasonable road and air services between Karratha and Port Hedland. The road between Karratha and Port Hedland is not always reliable, however, as it can be closed by rain during the summer months.

13. Port Hedland, the focal point of the Eastern Corridor, consists of a number of settlements including the old town of Port Hedland and nearby Spinifex Hill and Cooke Point, the new settlement of South Hedland, which is some 19 km by road from Port Hedland, and Finucane Island, which is some 16 km by road from South Hedland and some 28 km by road from Port Hedland. Future development will be concentrated in South Hedland. The population of Port Hedland totalled 11,144 at the 1976 census count.

14. Karratha, the focal point of the Western Corridor, is the primary node within what is envisaged as a multi-nodal community. It is by road some 22 km from Dampier, 73 km from Wickham and 38 km from Roebourne. At the 1976 census the populations were Karratha - 4243, Dampier - 2727, Wickham - 2312 and Roebourne - 1368. Future development is likely to be concentrated at Karratha, with the possibility of some development at Wickham should the Broken Hill Proprietary Company proceed to develop its deposits of iron ore at Deepdale.

15. At present, the population within the Pilbara region is distributed about equally between the two corridors. The majority of the population lives in the major mine, port and other coastal settlements. A very few people live on sheep stations and in small mining camps and inland towns that have survived the gold rush days.

16. Some projections of the Department of Industrial Development quoted in Harman and White [2] indicate that the Pilbara is likely to grow rapidly over the next ten years as the mining, processing and shipment of iron ore

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Footnote (2): E.J. Harman and M. White, Post-Secondary Education Needs in the Pilbara, Report prepared for the Pilbara Regional Development Committee, p.6.

is expanded and the gas reserves of the North-West Shelf are developed. The Department of Industrial Development has produced a report outlining two quite different models of possible development for the Pilbara over the next decade(3). In terms of the first model the major economic activity, iron ore mining and shipment, is allowed to develop to the maximum extent now planned by the companies involved, and the North-West gas fields are developed. (In this model, Hamersley Iron develops a second concentrator and a metallisation plant and expands output; Cliffs Robe River Iron expands pellet production; Goldsworthy Mining successfully transfers to area C; and Deepdale is established.) In the second model, the gas fields are developed, but only a minimum number of the plans in the mining sector are implemented. In particular, Goldsworthy Mining ceases operation, and the growth of Hedland is considerably slowed(4).

17. The Department of Industrial Development has estimated that in terms of the first model the region will have over 78,000 people in 1986, whereas in terms of the second model it will have over 65,000 people(5). Details of the estimated distribution of population under the two models are contained in Tables 2 and 3. While some optimism regarding growth aspects in the Pilbara may be warranted, the Department of Industrial Development's population projections should be treated with some caution. There is no guarantee that the processing and shipment of iron ore will expand and at this stage it is probably too early to know when, and at what rate, the gas reserves of the North-West Shelf will be developed. Accordingly, the projected increases in population from 38,687 in 1976 to either 78,150 or 65,240 in 1986 may be too optimistic. On the other hand, there appears to be no reason to believe that mining activity in the Pilbara will be short-lived or that the population in the region will decline in the foreseeable future. While some of the existing mines have a limited life expectancy, high grade iron ore reserves in the area are substantial. There are also large deposits of lower grade ore which some companies are now planning to upgrade for export. The iron ore mining industry is experiencing some difficulties at present due to reductions in orders from some Japanese steel mills. Goldsworthy Mining in particular is anxious to obtain new orders

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Footnote (3): Department of Industrial Development confidential report entitled Population Projections for the Pilbara 1976-1986, August, 1977, quoted in Harman and White.

(4): Harman and White, pp 67, 68.

(5): Harman and White, p.68

TABLE 2

ESTIMATES OF TOTAL PERMANENT POPULATION IN THE PILBARA (MAXIMUM GROWTH - OPTION 1)

Local Government Area	Roebourne						West Pilbara				
Town / Year	Roebourne	Dampier	Karratha	Point Samson	Wickham	Total Popn. LGA (a)	Wittenoom	Onslow	Tom Price - Paraburdoo	Pannawonica	Total Popn. LGA (a)
1971	1515	3585	1838		1959	9944	422	349	6403		8910
1976	1368	2727	4241	105	2312	11232	379	220	5595	583	7493
1981	1670	2727	7890	105	4300	17020	380	220	9060	1550	11930
1986	1970	2727	16500	105	6990	28620	380	220	10870	3070	15260

Local Government Area	East Pilbara								Port Hedland		Pilbara Total
Town / Year	Marble Bar	Golds-worthy	Shay Gap	Area C	Newman	Blue Spec at Nullagine	Telfer	Total Popn. LGA (a)	Port Hedland town	Total Popn. LGA (a)	
1971	394	1020			4672			6670	7229	7682	33206
1976	262	989	856		5190	126		8180	11143	11778	38683
1981	260			1740	7460		270	10490	13310	13950	53390
1986	260			2390	10000			13950	19680	20320	78150

SOURCE : Harman and White

NOTE: (a) These figures include people who live outside the towns listed, but within the relevant Local Government Area.

to allow it to open up the Area C deposits and transfer its mining operations from Goldsworthy and Shay Gap. However, the Commission that the long term future of the region is assured. While there will be fluctuations over time in the world demand for steel, there is unlikely to be a large permanent reduction in demand.

18. There are a number of characteristics associated with the Pilbara which may have some bearing on the region's needs for post secondary education. The climate is severe with the summer months being particularly uncomfortable because of the high temperature and humidity levels and the frequency of cyclones. The various settlements in the region are relatively isolated and the heat in the summer months adds to the sense of isolation as people tend to spend more time in their air-conditioned houses. Many of the towns in the area are "one employer" towns and the various companies concerned have, through necessity, become involved in activities which are normally the province of State and Local Government. The majority of people in the area are relative newcomers who are unlikely to stay for any length of time. Many of them have come from the major metropolitan areas in Western Australia and the Eastern States and will return there within a few years. The Commission was informed, however, that in recent years the average length of stay of Pilbara residents has been increasing significantly. Although the situation has been changing in recent years as the region has stabilised, the population is still relatively young and predominantly male. The age-sex structure of the region is detailed in Figure 1. In the past there has been a tradition of long shifts and long working weeks with little time left to pursue educational or cultural activities. In any event, educational and cultural amenities have been somewhat limited. In more recent times, however, some of the mining companies have responded to the need to reduce output by shortening the working week for their employees. The Commission understands that shorter hours are now likely to become a permanent feature of employment in the Pilbara. The Commission was informed that labour turnover has fallen considerably in recent years, reflecting no doubt the shortage of employment opportunities elsewhere. It seems likely that a fall in labour turnover and a reduction in working hours will allow a greater community involvement in educational and cultural activities, and this will increase the stability of the area.

TABLE 3

ESTIMATES OF TOTAL PERMANENT POPULATION IN THE PILBARA (MINIMUM GROWTH - OPTION 2)

Local Government Area	Roebourne						West Pilbara				
Town / Year	Roebourne	Dampier	Karratha	Point Samson	Wickham	Total Popn. LGA (a)	Wittenoom	Onslow	Tom Price - Paraburdoo	Pannawonica	Total Popn. LGA (a)
1971	1515	3585	1838		1959	9944	422	349	6403		8910
1976	1368	2727	4241	105	2312	11232	379	220	5595	583	7493
1981	1670	2727	7890	105	3520	16240	380	220	9060	960	11340
1986	1970	2727	17440	105	4910	27480	380	220	11550	1880	14740

Local Government Area	East Pilbara								Port Hedland		Pilbara Total
Town / Year	Marble Bar	Golds-worthy	Shay Gap	Area C	Newman	Blue Spec at Nullagine	Telfer	Total Popn. LGA (a)	Port Hedland town	Total Popn. LGA (a)	
1971	394	1020			4672			6670	7229	7682	33206
1976	262	989	856		5190	126		8180	11143	11778	38683
1981	260				7460		270	8750	10020	10660	46980
1986	260				9190			10210	12170	12810	65240

SOURCE: Harman and White

NOTE: (a) These figures include people who live outside the towns listed, but within the relevant Local Government Area.

PILBARA & STATE POPULATION AGE-SEX STRUCTURES

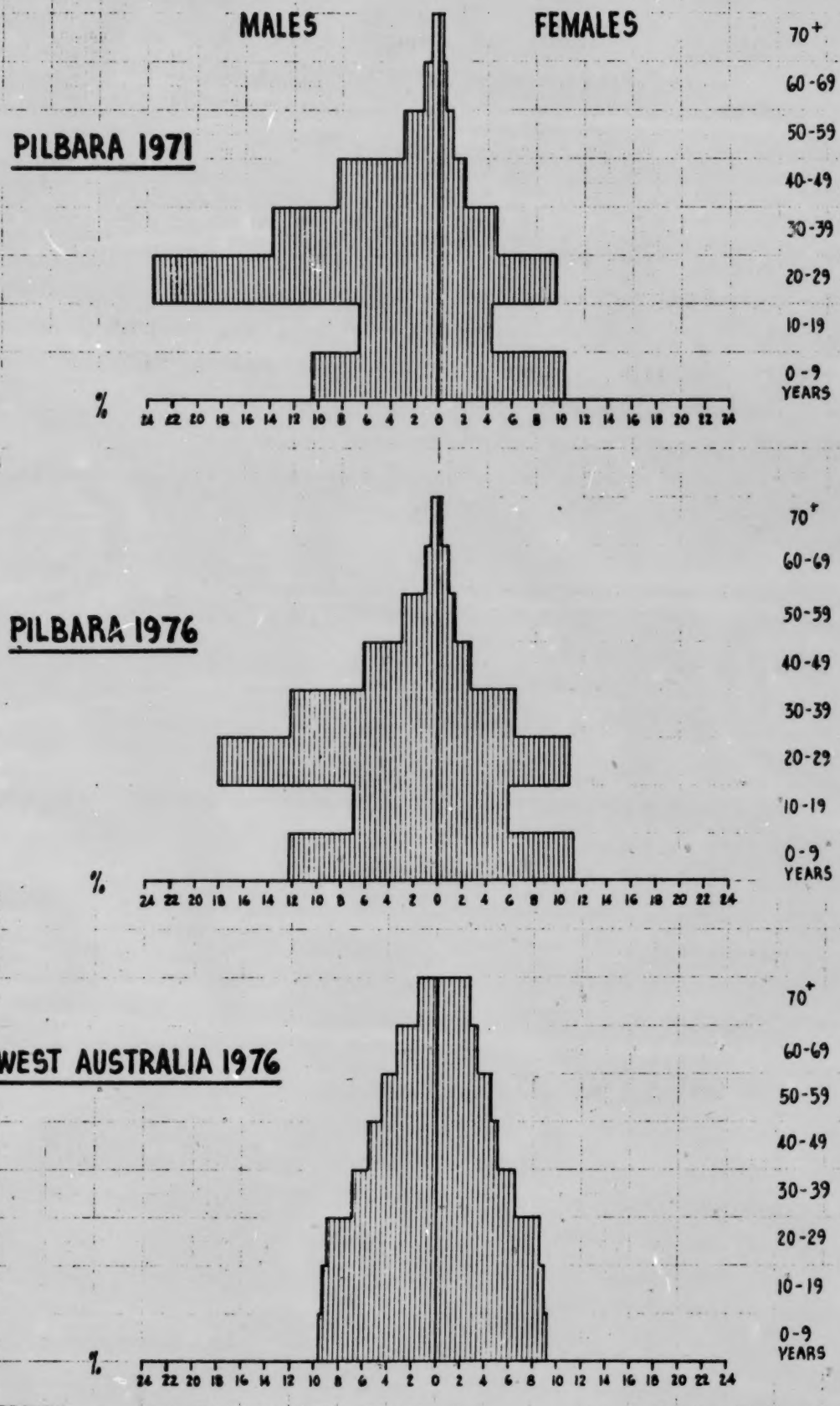

FIGURE 1

SOURCE : Harman and White

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DEMAND FOR POST SECONDARY EDUCATION

19. Total demand by Pilbara residents for all types of post secondary education is detailed in Tables 4 and 5. Table 4 includes enrolments at institutions in the Pilbara and in Perth. Some minimal overlap occurs both within and between the two tables.

20. Demand for post secondary education in the region is very high. In fact, in the peak year of 1976, 12.6% of the population of the region enrolled for courses at post secondary institutions, compared with the State proportion of only 10.8%. The relatively high level of demand for post secondary education in the Pilbara may be related to a number of factors including -
    (a) the demands made by a growing resource economy;
    (b) the age-sex structure of the population; and
    (c) the use of education as an opportunity for recreation and social interaction in Pilbara communities.

21. Harman and White argue that it is likely that demand for post secondary education will eventually fall back in relative terms as the communities acquire more social and cultural facilities, the age-sex structure normalises, the workforce ages and stabilises and the growth in the economy slows. However, it is difficult to predict when this may happen.

22. The highest demand has, from the outset, been in the area of adult education, where women students predominate. The second highest demand has been for para-professional and post-trade training. This area encompasses business and clerical studies related to commercial and office employment, and management and technical courses for skilled workers. The third highest demand has been for preparatory courses related to adult matriculation and entry to Technical Education Division courses.

23. Table 5 indicates the heavy involvement of the mining companies in the provision of courses for their employees. Because of their nature, induction courses and courses for operators must be conducted by the companies concerned. Some of the companies have indicated that they would prefer to have at least some of the courses for skilled tradesmen and for professional and managerial staff conducted by one or more post secondary education institutions. This would also have the advantage of offering the individuals concerned the opportunity of obtaining a recognised and portable qualification.

TABLE 4

PILBARA STUDENTS ENROLLED IN SELECTED POST SECONDARY EDUCATION INSTITUTIONS IN 1977

INSTITUTION	STUDENTS
Technical Education Centres in the Pilbara	3360
Technical Extension Service	1141
Pundulmurra Vocational Training Centre	114
Universities and Colleges of Advanced Education	264
TOTAL:	4879

SOURCE: Harman and White and the Technical Education Division

NOTES: (a) The figures exclude a small number of Pilbara students enrolled at other Technical Colleges and Centres.

(b) Some double counting will occur within the table where students are enrolled at more than one institution.

TABLE 5

ATTENDANCES AT SELECTED MINING COMPANY TRAINING COURSES IN THE PILBARA, 1973-1977

		COURSE												
COMPANY	YEAR	PRE-VOCATIONAL	INDUCTION	SEMI-SKILLED		SKILLED			PROFESSIONAL and technical up-date	MANAGEMENT				OTHER incl. Safety
				Operators	Office/ Clerical	Apprenticeship	Trade re-training	Skill up-date: Clerical		Management	Mid-Management	Supervisors Foremen	Graduates	
Newman	1973		969	233		8	67	59				138		44
	1974		2140	458		32	45		18		87	40		86
	1975		2080	738		37	512	235	9		273	212		53
	1976	6	1819	1333	22	23	552	194		10	134	442	90	92
	1977	10	1017	352	326	40	281	255	60	230	80	144		105
Hamersley	1973		1777	481		612	966				64	1029		610
	1974		2131	1412	16	945	716				105	566		3655
	1975		2412	1370	21	1270	1120		14		60	472		1061
	1976		4090	1545	259	1559	568		89		716	758	224	3476
	1977		1859	478	52	1221	180		31		919	690	306	2315
Goldsworthy	1973													
	1974			NOT AVAILABLE, but are known to be small										
	1975													
	1976													
	1977													
Cliffs Robe River	1973													
	1974			NOT AVAILABLE										
	1975													
	1976		628	101		19								
	1977		216	50		33				24		177		

SOURCE: Harman and White

NOTE: (a) The figures for 1977 are for part of the year only.
(b) This Table records the number of attendances only. Courses vary in duration from one hour to several weeks.

THE EXISTING PROVISION OF POST SECONDARY EDUCATION

24. Pilbara residents who wish to undertake post secondary education courses may -

(a) attend classes conducted locally by educational institutions and other organisations;

(b) enrol for courses offered by correspondence (external study) by institutions within and outside Western Australia; and

(c) travel to Perth or elsewhere to enrol as internal students in metropolitan institutions.

Courses Conducted Locally for Pilbara Residents

25. The Technical Education Division operates Evening Technical Schools (with full-time officers-in-charge) at Port Hedland, Karratha and Pundulmurra Vocational Training Centre, and Technical Education Centres (with part-time officers-in-charge) at Dampier, Goldsworthy, Newman, Pannawonica, Paraburdoo, Roebourne, Tom Price and Wickham. The part-time officers-in-charge of the Technical Education Centres are usually members of staff of the local high school. The part-time teaching staff for both the Evening Technical Schools and the Technical Education Centres is usually drawn from either people within the community or, in the case of instruction for tertiary admission examinations, from the staff of the appropriate high school.

26. Enrolments at the various Technical Education Division facilities in the Pilbara are summarised in Tables 6 and 7. In the larger centres, notably Port Hedland and Karratha, there is a significant number of enrolments in the matriculation and para-professional areas. The heaviest enrolments, however, are in the adult education area, and in most cases the majority of students are women. Evening and adult education classes are said to play an important role in isolated communities by providing women, especially housewives, with opportunities for social interaction, intellectual stimulus and skill upgrading. Despite the fact that adult women comprise a small proportion of the Pilbara population, housewives have comprised almost one-quarter of all technical and adult education enrolments by Pilbara residents over the last few years. It has been suggested that the demand is, in fact, higher than that shown by enrolment figures, since many women wish to spend evenings with their husbands and families. The possibility of establishing day classes in adult education has been tentatively explored by the Officer-in-Charge of the Hedland Evening Technical School, with

TABLE 6

STUDENT ENROLMENTS BY SEX AT PILBARA EVENING TECHNICAL CENTRES, 1974 - 1977

CENTRES	1974			1975			1976			1977		
	M	F	T	M	F	T	M	F	T	M	F	T
Western Corridor												
Karratha	59	228	287	267	370	637	268	445	713	296	588	884
Wickham	3	24	27	20	104	124	16	60	76	94	109	203
Tom Price	23	33	56	161	140	301	52	127	179	124	234	358
Paraburdoo				177	126	303	122	122	244	125	125	250
Sub-total			370			1365			1212[a]			1695
Eastern Corridor												
Hedland[b]	75	119	194				687	835	1522	558	710	1268
Newman	34	75	109	86	119	205	185	211	396	145	247	392
Goldsworthy				6	6	12	36	39	75	1	4	5
Sub-total			303			[b] 217			1993			1665
TOTAL:			673			[b] 1582			3205			3360

SOURCE: Harman and White and the Technical Education Division

NOTES: (a) In 1976 a small centre which functioned at Pannawonica enrolled 107 students.

(b) Figures for Hedland in 1975 are excluded from Harman and White's table.

TABLE 7

STUDENT ENROLMENTS BY STREAM AT PILBARA EVENING TECHNICAL CENTRES, 1974 - 1977

Corridor	Year	TAFE STREAM 2 Para-professional	3a Apprentice Trade	3b Post-trade	4 Other Skilled	5 Pre-paratory	6 Adult Education	Total
Western	1974	12				11	347	370
	1975	383			71	98	813	1365
	1976	291	1	22	43	83	772[a]	1212
	1977	140	2	5	4	113	1431	1695
Eastern	1974					60	243	303
	1975[b]	27			13		177	217[b]
	1976	510	2	61	49	49	1322	1993
	1977	336	24	31	58	40	1176	1665

SOURCE: Harman and White and the Technical Education Division

NOTES: (a) In 1976 a small centre which functioned at Pannawonica enrolled 107 students.
(b) Figures for Hedland in 1975 are excluded from Harman and White's table.

limited success. It would appear that attendance at day classes is dependent upon suitable arrangements being made for child care, a matter which could, perhaps, be pursued by the Technical Education Division.

27. Technical Education Division classes are almost equally popular in both the Western and Eastern Corridors, with the two major centres, Karratha and Port Hedland, having by far the largest enrolments. These are the only schools at which technical education officers have been appointed to administer the classes. These officers also have some responsibilities for the Technical Education Centres in their respective corridors.

28. The participation of Pilbara residents in part-time technical classes compares favourably with that experienced at some other country centres in Western Australia. For example, in 1977, 1269 students enrolled for part-time courses at Port Hedland and 887 enrolled for similar courses at Karratha. The part-time enrolment at the Eastern Goldfields Technical College in 1977 was 1504, while the figure for Albany was 1987.

29. The Commission understands that where attendance at evening technical classes drops below a certain prescribed level the classes are cancelled. This leads to severe problems for the students concerned who have either to cease attending classes for the year, attempt to join a class in another subject, or transfer their enrolment to a correspondence course. The Commission is aware that this problem exists throughout the State but believes that in the Pilbara environment, particularly, every attempt should be made to facilitate and encourage attendance at evening technical classes, as this will increase the stability of the area.

30. The Technical Education Division also operates a number of facilities that provide for the special education needs of Aboriginal people in the Pilbara. Of special importance in this regard is the Pundulmurra Vocational Training Centre at South Hedland, which until 1978 was administered by the Technical Education Division. Pundulmurra is a residential training centre which provides a range of technical instruction and social training to Aboriginal people from all areas of the North West. It provides short term and long term courses designed to develop student employability and it aims to assist Aboriginal people to participate in the local economic and social life of their communities, not only through its on-campus courses but also by training staff for employment by Aboriginal communities. The Aboriginal

Education Branch of the Education Department has recently taken over Pundulmurra from the Technical Education Division, and this may well lead to some changes in both philosophy and mode of operation. The physical facilities at Pundulmurra include workshops and general teaching areas, staff studies, recreational and cafeteria areas and accommodation for students and staff. Enrolments at Pundulmurra for the years 1975 to 1977 are detailed in Table 8.

TABLE 8

STUDENT ENROLMENTS AT PUNDULMURRA VOCATIONAL TRAINING CENTRE, 1975-1977

YEAR	COURSE									TOTAL		
	Para-professional			Preparatory			Adult Education					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1975							76	22	98	76	22	98
1976	1		1	1	13	14	50	11	61	52	24	76
1977	1		1	5	10	15	65	33	98	71	43	114

SOURCE: Harman and White and the Technical Education Division

31. In addition to the formal courses offered at Pundulmurra, the Technical Education Division also offers Adult Aboriginal Education classes at Gogo, Jigalong, Marble Bar, Pundulmurra and Roebourne.

32. It has been suggested to the Commission that it would be possible to meet some of the post secondary education needs of the Pilbara by broadening the role of Pundulmurra so that it is no longer restricted to offering courses for Aborigines. The Commission is of the view that this would not be feasible in the present context. Pundulmurra is operating in a difficult and sensitive area and its role in the training of Aborigines is likely to be prejudiced if it has to take on the functions associated with a conventional technical college. In any case, the facilities at Pundulmurra would need extensive additions to cope with the demands of apprenticeship training.

Both of the major mining companies in the region provide extensive training opportunities for their employees. These range from simple induction courses for new employees, to programs for apprentices, operators and office workers. In addition there are "man-management" style courses conducted for employees at different levels in the companies. Short courses for skilled workmen and for professional staff are also provided as the need arises.

34. Table 5 reports the extent of company training in the Pilbara region for the years 1973-1977. The courses listed range from programs of very short duration to those that require some months' work. The tables expressing participation in company courses therefore need to be interpreted carefully. The programs are not formal education programs in the same sense as those conducted by the educational institutions.

35. The Trade Union Training Authority has begun to offer short courses for shop stewards and other union officials in the area. The programs are organised from the Trade Union Training Offices in Perth, but are conducted in the Pilbara itself. The significance of this work is likely to grow as arbitration and conciliation facilities are provided at the local level, as planned.

36. In addition to the Trade Union Training Authority programs, the Adelaide based Workers Educational Association provides a range of correspondence courses for trade unionists. These range from programs designed to improve the basic education skills of workers to those aimed at widening the scope of their general education, and include courses designed specifically to assist trade union officials to perform their functions.

Correspondence and External Courses for Pilbara Residents

37. Correspondence courses are conducted by the Technical Extension Service of the Technical Education Division. (See Table 9). The majority of enrolments are in the para-professional courses which include management, business and commercial studies. By comparison, enrolments in preparatory and adult education correspondence programs are relatively small, reflecting the popularity of local evening classes.

TABLE 9

ENROLMENTS OF PILBARA STUDENTS BY STREAM - TECHNICAL EXTENSION SERVICE, 1974 - 1977

TAFE STREAM	1974			1975			1976			1977		
	M	F	T	M	F	T	M	F	T	M	F	T
2 Para-professional	127	38	165	462	122	584	615	203	818	419	153	572
3a Apprenticeship Trades	72	1	73	355	1	356	341	3	344	271	3	274
3b Post-trade	14	1	15	88	5	93	67	2	69	23	-	23
4 Other skilled	31	7	38	40	27	67	81	62	143	67	33	100
Sub-total			291			1100			1374			969
5 Preparatory	21	34	55	86	73	159	52	85	137	55	62	117
6 Adult Education	1	2	3	13	21	34	26	33	59	25	30	55
TOTAL:	266	83	349	1044	249	1293	1182	388	1570	860	281	1141

SOURCE: Harman and White and the Technical Education Division

38. Apprenticeship courses are also provided by correspondence, and it has been pointed out to the Commission that the training of apprentices is more important to the Pilbara than their numbers in relation to other educational areas would suggest. Apprentices are essential to the basic industry, mining, as a source of skilled tradesmen, and apprenticeships provide the most important opportunity for school leavers seeking a non-academic career. Apprentices are heavily concentrated in the following related trades:

- Fitting
- Fitting and turning
- Motor mechanics
- Electrical installing
- Auto electrical fitting
- Boilermaking
- Refrigeration fitting.

39. In addition to undertaking correspondence courses, apprentices also attend short intensive courses at a number of metropolitan and other technical colleges. Table 10 shows students attending such courses in 1977 while Table 11 shows all Pilbara students enrolled in apprenticeship trades courses with the Technical Education Division in 1977.

40. As well as providing correspondence material from Perth, the Technical Extension Service arranges for members of its tutorial staff to visit the Pilbara for discussions with students. In 1977, thirteen centres in the Pilbara were visited in the period 13 to 23 September. In addition, the officers-in-charge of the full-time Evening Technical Schools at Hedland and Karratha are available for consultation with students in the region. The work of the Technical Education Division is supplemented by the major companies who provide staff to assist apprentices with correspondence courses.

41. The Commission has been informed of some criticisms of the correspondence service provided by the Technical Extension Service. Some of these criticisms relate to problems which are probably beyond the control of the Service (e.g. the length of time it takes for mail to be transmitted between Perth and the Pilbara.) Other criticisms, however, relate to the length of time it takes for lessons to be marked and the quality of some of the material provided to students. In particular, a number of people associated with apprentice training believed that some of the correspondence material was years out of date. In addition, there are problems associated with

TABLE 10

PILBARA STUDENTS ATTENDING CLASSES IN SELECTED WESTERN AUSTRALIAN TECHNICAL COLLEGES,

1974 - 1977

TECHNICAL COLLEGE	1974			1975			1976			1977		
	APPREN-TICES	OTHER	TOTAL	APPREN-TICES	OTHER	TOTAL	APPREN-TICES	OTHER	TOTAL	APPREN-TICES	OTHER	TOTAL
Albany											1	1
Balga				40		40	76	1	77	99		99
Bentley				5		5	1		1	5	1	6
Bunbury							15		15			
Carlisle				50		50	72		72	87		87
Fremantle	1	1	2	17		17	2		2	9	13	22
Leederville	3	1	4	6	1	7	4	1	5	14		14
Midland		1	1		1	1					1	1
Mt Lawley	11	2	13	4	1	5	12		12	6		6
Wembley	63		63	79		79	92	2	94	145	1	146

SOURCE: Harman and White and the Technical Education Division

NOTE: Trade Specialities: Leederville - Carpentry & Joinery, Painting & Decorating
Mt Lawley - Electrical Fitting, Instrument Fitting, Refrigeration Engineering
Wembley - Fitting & Turning, Metal Construction, Welding, Machine Fitting
Balga - Electrical Fitting, Electrical Installing
Bentley - Baking, Meat Industry
Carlisle - Automotive Electrical Fitting, Auto Mechanical.

TABLE 11

PILBARA STUDENTS ENROLLED IN APPRENTICESHIP TRADES COURSES WITH THE TECHNICAL EDUCATION DIVISION, 1977

APPRENTICESHIP TRADE	ENROLMENTS[a]
Carpentry & Joinery	10
Painting, Signwriting & Decorating	13
Plumbing	13
Automotive Electrical Fitting	7
Automotive Mechanical	105
Panel Beating	1
Spray Painting	1
Metal Construction	13
Fitting & Machining	47
Instrument Fitting	5
Welding	71
Mechanical Fitting	2
Sheet Metal Work	1
Pre-App. Fitting & Machining	2
Pre-App. Automotive Mechanical	1
Electrical Fitting	126
Radio & Television Servicing	1
Refrigeration Fitting	18
Electrical Installing	15
Cooking	4
Baking	3
Meat Industry	4
Ladies Hairdressing	4
TOTAL:	467

SOURCE: Technical Education Division

NOTE: (a) Enrolments by individual students. No multiple counting is involved in this table.

the supervision of students attending intensive courses in Perth, and often the equipment with which the apprentices work in Perth bears little relationship in terms of size to the equipment found on the job.

42. University and advanced education courses are provided on an external basis to residents of the Pilbara by the WA Institute of Technology, Murdoch University and Mount Lawley Teachers College. In addition, the Commission has been informed that the WA Secondary Teachers College is developing opportunities for secondary teachers to undertake a post-experience Bachelor of Education course whilst holding a country appointment. Details of enrolments of Pilbara residents for the years 1975 to 1977 are shown in Table 12.

43. According to Harman and White, the WA Institute of Technology and Murdoch University complement rather than compete with each other in the provision of external courses in the Pilbara. In 1977, 75 of the WA Institute of Technology students were enrolled in the business studies/management area, 8 in Metallurgy and 4 in Teacher Education. In the same year, 14 of the Murdoch students were enrolled in teacher education, with the remainder being distributed across the humanities and social sciences, an area also serviced, in part, by the WA Institute of Technology.

44. Irrespective of the extent to which the courses offered by these institutions may be complementary, the Commission is aware that many people in the Pilbara are critical of what they see as duplication of courses and lack of co-ordination between the various institutions offering courses in the Pilbara.

45. External and correspondence enrolments in management and business studies courses conducted by both the WA Institute of Technology and the Technical Extension Service are particularly high. It has been argued that a sound case could be made for the appointment to the Pilbara region of a co-ordinator/organiser of management and business studies, whose duties would include supplementing external courses in these fields by way of tutorials and regular visits. The WA Institute of Technology has informed the Commission that in 1978 its Department of External Studies intends to appoint a lecturer/coordinator specialising in business studies who will spend some time in the North of the State in order to provide academic services for business studies students.

TABLE 12

PILBARA STUDENTS ENROLLED IN EXTERNAL COURSES AT UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION IN WESTERN AUSTRALIA, BY SEX, 1975 - 1977

INSTITUTION	1975			1976			1977		
	M	F	T	M	F	T	M	F	T
University of WA	3	6	9				1		1
Murdoch Univ.	9	1	10	16	16	32	32	23	55
WAIT		n.a.		71	21	92	96	26	122
Mt Lawley Teachers Coll.		n.a.		2	9	11	2	3	5
TOTAL:	12	7	19	89	46	135	131	52	183

SOURCE: Harman and White

46. Since the beginning of 1975, an agreement has operated between the Australian Inland Mission, Murdoch University and the WA Institute of Technology for the provision of a study centre at Karratha and the appointment of a joint coordinator for the Pilbara region. The Australian Inland Mission buildings at Karratha provide the physical facilities for seminars, tutorials and library storage, and an area for general office and administrative services. This centre is not only used extensively for educational purposes by the students in the Karratha area, but operates as a base for all students in the Pilbara region. Students travel in from outlying towns for intensive schools, seminars, etc. conducted at the Karratha centre.

47. The joint coordinator, an appointee of the Australian Inland Mission, is supported by secretarial staff operating at the centre. His role in the area is of a two-way nature. While he represents the WA Institute of Technology and Murdoch University in the Pilbara and executes an administrative and education function on behalf of the two institutions, he is required to maintain contact with all sections of the Pilbara community and keep the institutions informed of the regional demands for post secondary educational services. Within this plan, visits are conducted twice annually throughout the region, when representatives from the institutions join the coordinator in extensive 10-day programs. These visits provide opportunities for-

(i) the conducting of sessions on learning skills;
(ii) student orientation nights to enable students to meet academic staff and discuss any study problems or administrative difficulties;
(iii) the appointment of support tutors and consultants;
(iv) sessions with company executives and staff training officers;
(v) follow-up of currently enrolled students with regard to study progress, academic services, and general problems;
(vi) public meetings for information counselling or opportunities for study; and
(vii) visits to schools and libraries.

48. Since 1973, the WA Institute of Technology has sponsored a system involving the appointment of local experts as tutor/consultants. This experiment, which has involved the appointment of up to six tutor/consultants at any one time, has been limited to the Port Hedland and Karratha areas due to the number of enrolments and the cluster of external students in specific subject areas.

49. Murdoch University believes that substantial numbers of people in Pilbara communities seek access to tertiary level study without necessarily wishing to work towards a degree qualification. Accordingly, the University has designed and presented a tertiary extension course "The Man-Made World" which is intended to help people living in communities dominated by technology to appreciate the causes and consequences of their situation. The course, based on material produced by the British Open University, has been financed by Mount Newman Mining and Hamersley Iron and presented in Karratha, Port Hedland and Newman. One important feature of the course is that it may be accepted for credit towards a Murdoch degree for participants who subsequently enrol as undergraduates. Other extension activities have included the presentation of two specially adapted Murdoch undergraduate courses through the Meekatharra Royal Flying Doctor Service/School of the Air radio network to residents on widely dispersed and isolated stations.

Pilbara Residents Attending Metropolitan Institutions

50. Many Pilbara residents have to travel to Perth to obtain post secondary education at a variety of levels. It is not possible to identify the number of Pilbara residents who attend metropolitan technical colleges as the Technical Education Division does not collect the home address of students in Perth. The only exception is the enrolment of apprentices in short courses. Correspondence enrolments do, however, give an indication of the level of demand for technical and further education courses.

51. Pilbara residents who move to Perth to undertake university and advanced education courses can, on the other hand, be counted since a home address is kept by the institutions involved. Details of these enrolments are given in Tables 13 and 14. The enrolments of students from the Pilbara region in full-time and part-time university and advanced education programs available in Perth are relatively small, totalling only 75 in 1977. They are also scattered across a wide variety of specialist areas. This suggests that the Pilbara region would not be able to support university and advanced education courses for some time to come. In any event, it has been argued that the students concerned may well benefit by moving away from their own communities to study in larger metropolitan institutions.

THE SUB-REGIONAL DISTRIBUTION OF POST SECONDARY EDUCATION

52. Tables 13 to 15 show the distribution of post secondary students between the

TABLE 13

DISTRIBUTION OF POST SECONDARY EDUCATION STUDENTS BY TOWN - WESTERN CORRIDOR, 1974 - 1977

TOWN	YEAR	INSTITUTION										TOTAL
		Technical Education Division		University of WA		Murdoch University		WAIT		Teachers Colleges		
		Evening Classes(a)	Correspondence (b)	Internal	External	Int.	Ext.	Int.	Ext.	Int.	Ext.	
Dampier	1974		51					na		na		51
	1975		134	5	1			na		na		140
	1976		205	1			1	4	8	2	2	223
	1977		192	2			4	4	15	2		219
Karratha	1974	287	39					na		na		326
	1975	637	86	5	2		2	na		na		732
	1976	713	172	4			4	2	30	3	4	932
	1977	884	151	4			7	6	23	2	1	1 078
Wickham	1974	27	26					na		na		53
	1975	124	66	2			1	na		na		193
	1976	76	182	3				1	3			265
	1977	203	98	1			4		9		1	316
Roebourne	1974		11					na		na		11
	1975		28					na		na		28
	1976		37									37
	1977		32							1		33
Pannawonica	1974		4					na		na		4
	1975		15	1				na		na		16
	1976	107(c)	54	1		2			2	1		60
	1977		20				1		2	1		24
Paraburdoo	1974		44					na		na		44
	1975	303	114	1			1					419
	1976	244	135	2			4	1	7	1		394
	1977	250	166	1			9	2	13	1		442
Tom Price	1974	56	45					na		na		101
	1975	301	196				1	na		na		498
	1976	179	169	2			4	3	13	2		372
	1977	358	205	4		1	5	6	15	2	2	598

SOURCE: Harman and White and the Technical Education Division

NOTES: (a) Student enrolments (b) Course enrolments (c) Not included in total

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TABLE 14

DISTRIBUTION OF POST SECONDARY EDUCATION STUDENTS BY TOWN - EASTERN CORRIDOR, 1974 - 1977

TOWN	YEAR	INSTITUTION										TOTAL
		Technical Education Division		University of WA		Murdoch University		WAIT		Teachers Colleges		
		Evening Classes(a)	Correspond-ence (b)	Inter-nal	Extern-al	Int.	Ext.	Int.	Ext.	Int.	Ext.	
Port Hedland (Including South Hedland)	1974	194	128					na		na		322
	1975(c)		408	8	5		3	na		na		424(c)
	1976	1 522	623	10			13	8	28	6	4	2 214
	1977	1 268	462	8			20	8	24	5		1 795
Goldsworthy	1974		21					na		na		21
	1975	12	32					na		na		44
	1976	75	71					2	1		1	150
	1977	5	58	1				1	3			68
Shay Gap	1974		7					na		na		7
	1975		20				2	na		na		22
	1976		54				3		3			60
	1977		41	2			2		2		1	48
Newman	1974	109	55					na		na		164
	1975	205	198	1	1			na		na		405
	1976	396	206	1			4			1		608
	1977	392	205	4			9	3	13	1		627
Other	1974		6					na		na		6
	1975		19					na		na		19
	1976		48					2	2	1	1	54
	1977		58				1	2	3			64

SOURCE : Harman and White and the Technical Education Division

NOTES : (a) Student enrolments
(b) Course enrolments
(c) Figures for evening classes in Port Hedland in 1975 are excluded from Harman and White's table.

Western and Eastern Corridors of the Pilbara for the years 1974 to 1977. Total enrolments in each of the Corridors are approximately the same, and have been so at least since 1974. The majority of the enrolments in both Corridors are in evening technical classes. These cater to the needs for adult education, although significant enrolments also occur in para-professional and preparatory studies. Correspondence studies in technical areas are popular throughout the region, being used mainly by males for apprenticeship and para-professional courses (business management studies, etc.). By contrast, external university and advanced education studies are concentrated in the Hamersley Towns (Karratha, Dampier, Tom Price and Paraburdoo) together with Port Hedland.

TABLE 15

DISTRIBUTION OF POST SECONDARY EDUCATION STUDENTS
BY CORRIDOR, 1974-1977

YEAR	EASTERN CORRIDOR	WESTERN CORRIDOR	TOTAL
1974	520	590	1110
1975	914[a]	2026	2940[a]
1976	3086	2283	5369
1977	2602	2710	5312

SOURCE: Tables 13 and 14

NOTE: (a) Figures for evening classes in Port Hedland in 1975 are excluded from Table 14.

53. The special problems faced by apprentices make them probably the single most crucial group in determining the need for and feasibility of establishing post secondary education facilities in the Pilbara. Tables 16 to 19 show the distribution of apprentices in selected major trades. The tables show that the largest concentration of apprentices is at Port Hedland, particularly in electrical fitting and fitting and machining. The course

TABLE 16

EASTERN CORRIDOR - DISTRIBUTION OF APPRENTICE COURSE[a] ENROLMENTS IN SELECTED TRADES BY LOCATION, 1974-1977

LOCATION	YEAR	AUTO ELECT FITTING	AUTO MECH	ELECT FITTING	FITTING & MACH-INING	WELD-ING	METAL CONST-RUCTION	TOTAL
Hedland	1974	-	4	14	35	1	7	61
	1975	1	29	53	98	1	16	198
	1976	-	31	80	81	14	12	218
	1977	-	24	75	67	26	15	207
Sth.Hedland	1974	-	1	1	6	-	-	8
	1975	-	9	4	6	2	1	22
	1976	3	8	7	14	6	1	39
	1977	4	18	9	17	18	1	67
Newman	1974	1	4	1	13	-	-	19
	1975	1	34	14	32	4	-	85
	1976	2	33	8	20	6	-	69
	1977	5	38	18	19	13	4	97
Goldsworthy	1974	-	1	-	5	1	-	7
	1975	-	3	2	10	-	-	15
	1976	-	5	4	7	1	-	17
	1977	-	3	6	16	11	-	36
Shay Gap	1974	-	-	-	-	-	-	-
	1975	-	-	-	-	-	-	-
	1976	-	1	-	-	-	-	1
	1977	-	-	2	-	-	-	2
Other	1974	-	-	1	-	-	-	1
	1975	-	-	-	-	-	-	-
	1976	-	-	-	-	-	-	-
	1977	-	-	-	1	-	-	1

SOURCE: Harman and White and the Technical Education Division

NOTE: (a) This table shows the number of enrolments in various courses, including multiple enrolments (e.g. students who enrol for a correspondence course and also attend a Technical College in Perth for an intensive course are counted twice.)

TABLE 17

WESTERN CORRIDOR - DISTRIBUTION OF APPRENTICE COURSE[a] ENROLMENTS IN SELECTED TRADES BY LOCATION, 1974-1977

LOCATION	YEAR	AUTO ELECT FITTING	AUTO MECH	ELECT FITTING	FITTING & MACH-INING	WELD-ING	METAL CONST-RUCTION	TOTAL
Dampier	1974	-	1	3	10	2	-	16
	1975	2	8	18	19	1	-	48
	1976	4	15	38	23	-	-	80
	1977	5	17	44	25	10	-	101
Karratha	1974	-	1	1	4	-	-	6
	1975	1	9	9	5	-	-	24
	1976	1	-	16	10	1	-	28
	1977	-	12	12	15	6	-	45
Pannawonica	1974	-	-	-	-	-	-	-
	1975	2	-	-	-	-	-	2
	1976	-	2	-	3	2	-	7
	1977	-	2	-	2	2	-	6
Roebourne	1974	-	1	1	-	-	-	2
	1975	-	2	-	-	-	-	2
	1976	-	2	-	2	-	-	4
	1977	-	5	1	2	-	-	8
Wickham	1974	1	1	-	-	1	-	3
	1975	-	5	-	2	2	-	9
	1976	-	5	2	9	2	-	18
	1977	-	10	8	7	9	-	34
Tom Price	1974	-	3	1	16	-	-	20
	1975	7	20	12	22	8	2	71
	1976	6	24	17	25	9	-	81
	1977	7	28	19	22	10	-	86
Paraburdoo	1974	-	3	7	5	1	1	17
	1975	-	14	9	13	1	2	39
	1976	4	17	18	14	2	-	55
	1977	7	20	22	11	7	-	67

SOURCE: Harman and White and the Technical Education Division

NOTE: (a) This table shows the number of enrolments in various courses, including multiple enrolments (e.g. students who enrol for a correspondence course and also attend a Technical College in Perth for an intensive course are counted twice.)

TABLE 18

EASTERN AND WESTERN CORRIDORS - DISTRIBUTION OF APPRENTICE COURSE[a]

ENROLMENTS IN SELECTED TRADES, 1974 - 1977

CORRIDOR	YEAR	AUTO ELECT FITTING	AUTO MECH	ELECT FITTING	FITTING & MACH-INING	WELD-ING	METAL CONST-RUCTION	TOTAL
Western	1974	1	10	13	35	4	1	64
	1975	10	60	48	61	12	4	195
	1976	15	65	91	86	16	-	273
	1977	19	94	106	84	44	-	347
Eastern	1974	1	10	17	59	2	7	96
	1975	2	75	73	146	7	17	320
	1976	5	78	99	122	27	13	344
	1977	9	83	110	120	68	20	410

SOURCE: Harman and White and the Technical Education Division

NOTE: (a) This table shows the number of enrolments in various courses, including multiple enrolments (e.g. students who enrol for a correspondence course and also attend a Technical College in Perth for an intensive course are counted twice.)

Table 19

APPRENTICES REGISTERED WITH THE WESTERN AUSTRALIAN INDUSTRIAL TRAINING COMMISSION, 1977,[a] AND EMPLOYED BY PILBARA BASED ORGANISATIONS

EMPLOYER	PLACE OF REGISTRATION												TOTAL
	PERTH (b)	WESTERN CORRIDOR							EASTERN CORRIDOR				
		Dampier	Karratha	Tom Price	Paraburdoo	Wickham	Roebourne	Pannawonica	Newman	Pt Hedland	Sth Hedland	Goldsworthy	
State Govt Dept	8									8			16
Cliffs Robe River	9					17		1					27
Goldsworthy	11									11		3	25
Hamersley	12	54	10	49	31								156
Mt Newman	63								26	30			119
Other (Private & Local)	18	1	6				3		5	20	2		55
TOTAL	121	172							105				398

SOURCE: Harman and White

NOTES: (a) The figures were obtained during 1977 and are not, therefore, complete. According to Technical Education Division statistics there were in fact 467 Pilbara students who took apprenticeship courses in 1977.

(b) Apprentices registered in Perth may reside in either the Eastern or Western Corridor.

enrolments in the combined communities of Port Hedland and South Hedland are in excess of 200. Close to 100 course enrolments in these selected trades come from Paraburdoo and Tom Price, and a third cluster of similar size is found in the Dampier/Karratha/Wickham communities.

THE CASE FOR THE PROVISION OF ADDITIONAL POST SECONDARY EDUCATION FACILITIES

54. The Commission believes that additional post secondary education facilities are needed in the Pilbara for the following reasons -

(a) The region already exhibits a high level of demand for post secondary education, and the Commission has been informed(6) that Technical Education Division experience at Albany and Bunbury has shown that the provision of adequate facilities generates demand for a wide variety of post secondary education courses.

(b) The Commission has been informed that an overall population of about 10,000 is required to sustain a viable technical college in a country centre(7). The population of the region is now approximately 40,000 distributed about equally between the Western and Eastern Corridors, and it seems clear that there will be at least some growth in population over the next ten years.

(c) Pilbara residents face considerable difficulties in obtaining post secondary education. Some families send their children to post secondary education institutions in the major metropolitan areas. This can result in considerable financial costs and sometimes leads to emotional problems. Other families leave the region and settle in the major metropolitan areas in order to be with their children while they are attending educational institutions. This results in higher labour turnover which is expensive to the companies and, to some extent, disruptive to the communities in the Pilbara. It may also result in the family breadwinner having to take a less satisfying job. Pilbara residents who wish to remain in the

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Footnote (6): Education Department of Western Australia, Technical Education Division submission entitled A Study of the Feasibility of Establishing Community Colleges, November 1976, p.21.

(7): A Study of the Feasibility of Establishing Community Colleges, p.21.

region while undertaking post secondary education courses also face some problems. Students who undertake correspondence or external courses suffer from lack of contact with other students and with staff and may not be able to obtain adequate written material. Pilbara apprentices are unable to obtain supplementary instruction in theory and in particular skills by attending a technical college on day release. Instead they are required to undertake their study by correspondence supplemented by two weeks' intensive training at a technical college (usually in Perth). The two-week intensive training system has been severely criticised on the grounds that it is difficult to find suitable accommodation, maintain discipline and ensure that the apprentices actually attend classes.

(d) Industry in the Pilbara has a continuing need for additional qualified tradesmen, technicians, technologists and other categories of skilled and semi-skilled workers and for courses to enable employees to update and improve their skills and qualifications. If a decision is made to exploit the North West Shelf gas, shortages of skilled manpower in the Pilbara, and possibly in Australia as a whole, are likely to occur.

(e) A post secondary education facility located in the Pilbara is likely to be sensitive to the needs of major employers in the region. The Commission has been informed that the scale of mining operations and the magnitude of much of the plant and equipment used has resulted in the Pilbara iron ore mining companies having rather specialised requirements for skilled labour. The Commission understands that at present the type of training received by apprentices in some trades is not particularly relevant to the types of functions skilled tradesmen are required to perform in the Pilbara. While it would not be appropriate for a post secondary education institution in the Pilbara to tailor apprenticeship courses solely to meet the requirements of the mining companies in the region, it would at least be aware of the needs of the companies and could, presumably, have some access to the companies' specialised equipment for training purposes.

(f) While the larger mining companies in the region are, by and large, able to make some arrangements for the training of their own apprentices, the lack of adequate education facilities makes it

very difficult for smaller employers to take on apprentices. The Commission is of the view that smaller employers in the region should be encouraged to take on as many apprentices as possible in order to reduce the Pilbara's reliance on the major mining companies for employment opportunities and in order to add to the diversity of job opportunities available.

(g) Between four and five hundred young people are expected to leave Pilbara schools each year between 1977 and 1980 after ten, eleven or twelve years of schooling (see Table 20 for details). Local employment prospects are very limited. Pilbara employers complain frequently that school leavers compare unfavourably with older, more mature and/or trained applicants, although the difference in salary rates is minimal. The Commission believes that there is a need to provide pre-apprenticeship and other vocational training in the Pilbara for at least some of these students.

(h) A number of high schools in the Pilbara has introduced terminal or pre-vocational year 11 or year 12 courses designed to prepare students to enter the workforce. The Commission is of the view that there will be a continuing and growing demand for these types of courses and that a post secondary education facility in the region could make a significant contribution to such courses.

THE LOCATION OF ADDITIONAL POST SECONDARY EDUCATION FACILITIES

55. While there may be some advantages in concentrating post secondary education facilities at one location in the Pilbara, the Commission believes that additional post secondary education facilities should be provided at both Karratha and Port Hedland. Transport links between the mines and their respective ports are excellent and would facilitate the movement of staff, students and parents of students within the two corridors. The difficulties of communicating between the two corridors would, however, severely limit the likelihood of students who reside in one corridor attending a post secondary education facility in the other corridor. In addition, there has over the years been a substantial interchange of personnel between the various mining companies' mines and ports and many of the residents of the inland towns have friends or acquaintances who live in the port towns in the same corridor. Accordingly, it has been suggested that many of the residents of inland towns would want their children to attend a post secondary education institution located in the corridor in which they

TABLE 20

PREDICTED NUMBERS OF SCHOOL-LEAVERS FROM PILBARA SCHOOLS, 1977 - 1981[a]

	1977		1978		1979		1980		1981	
	Enrolled	Leave	Enrolled	Leave	Enrolled	Leave	Enrolled	Leave	Enrolled	Leave
Year 10[b]	440	238	486[c]	267	481[c]	271	499	279	535	n.a.
Year 11[d]	191	133	202	138	219	146	210	143	220	n.a.
Year 12	53	53	58	58	64	64	73	73	67	67
TOTAL ENROLLED	684		746		764		782		822	
TOTAL SCHOOL LEAVERS		424		463		481		495		
Annual Increase in School-Leavers				+39		+18		+14		

SOURCE: Harman and White

NOTES : (a) These figures have been derived from predicted enrolments by class provided by the Education Department of Western Australia for the five Pilbara schools supplying secondary education. The predictions for each year are based on enrolments in previous years. Hence they do not take into account the Department of Industrial Development population and labour force projections used elsewhere in this report. If growth occurs as predicted, the figures in this table may underestimate the potential number of school-leavers seeking work in the Pilbara in the future.

(b) Some of those leaving year 10 from Pilbara schools may not be school-leavers but may plan further education at another school.

(c) Maximum estimates for Tom Price in 1978 and 1979 are used.

(d) A planned year 11 class for 1978 at Tom Price has not been included.

live because of the availability of guidance and supervision. Indeed, many individuals have indicated that if a facility were located in the corridor in which they do not live, they would prefer to send their children to Perth or to other metropolitan centres for post secondary education. Similarly, some of the major companies have indicated that they would prefer to send apprentices to Perth than to a facility located in the corridor in which they did not have a presence, as they have personnel in Perth who can supervise and coordinate apprentice activities.

56. In any event, the Commission believes that in view of both the size and distribution of the population it is not unreasonable to establish two institutions in the Pilbara. The Commission would, however, expect that the two institutions would cooperate wherever possible and that they would not necessarily have the same facilities, specialist staff or courses.

57. The Commission is of the view that it is not possible to distinguish a priority between the claims of Karratha and Port Hedland for a post secondary education institution. Karratha probably has the best prospects for future growth and development and is developing as the administrative centre for the region. On the other hand, Port Hedland currently has a larger population and a greater number of apprentices. It is older and encompasses a wider spread of facilities and services than Karratha. It also hopes to participate in the development associated with the North-West Shelf gas by acting as a supply base during both the construction and production stages. However, the Commission believes that Port Hedland is unlikely to experience significant growth in the short to mid-term unless Goldsworthy Mining's Area C deposits are developed and, at this stage, this is in some doubt.

58. The Commission urges, therefore, that the construction of post secondary education facilities at Karratha and Port Hedland be commenced at approximately the same time.

THE NATURE OF ADDITIONAL POST SECONDARY EDUCATION FACILITIES

59. While the post secondary education needs of the Pilbara could be met in a variety of ways, the nature of development in the region and the existing demand for post secondary education suggest that any institutions which are established will have a substantial component of technical

education courses. Indeed, the Commission believes that the most pressing requirement is for facilities to cater for apprenticeship needs.

60. Given the pressing demand for technical education courses, the question arises as to whether the post secondary education needs of the Pilbara could best be met by the establishment of traditional technical colleges under the control of the Technical Education Division of the State Education Department. Certainly the establishment of technical colleges in the Pilbara would be a relatively simple matter. The Technical Education Division has recent experience in establishing technical colleges in country areas and has substantial resources which could provide valuable support to an institution in a remote area. However, the Commission believes that it would not be appropriate to attempt to meet the post secondary education needs of the Pilbara by establishing traditional technical colleges for the following reasons:-

(a) Any institutions that are established in the Pilbara should have some responsibilities for the whole range of post secondary education activities. There is a tendency for people in the Pilbara to be frustrated and confused by the apparent multiplicity of institutions offering a large number of courses, some of which appear to overlap. Many of those interviewed suggested that there was a need to coordinate the activities of the various institutions in order to simplify procedures, improve the flow of information to potential students, and encourage opportunities for cooperation and consultation between both staff and students of the various institutions. In addition, it is unlikely that the metropolitan higher education institutions will be able to devote substantial resources to the Pilbara, given the isolation of the region, the relatively small numbers of students enrolled for external university and advanced education courses and the tightening up of funding. On the other hand, Pilbara based institutions could make accommodation available for private study and tutorials, arrange for staff with appropriate skills to assist external students, and act as central information points for anyone wishing to obtain details of courses offered by all post secondary education institutions in the State. The Commission believes that it would be difficult for a traditional technical college to perform these broader

functions associated with other areas of post secondary education and that, in any event, the other post secondary education institutions concerned would not accept the Technical Education Division acting in this role.

(b) The relative isolation of the Pilbara and the recent nature of most of the development suggests that the region's post secondary education needs could best be met by institutions with strong links to the local community. Such links could best be forged if members of the Pilbara community were involved in the governance of the institutions. The Pilbara is an evolving region with constantly changing needs. It has a relatively new population which is gradually becoming involved with community activities. Pilbara based institutions with local representatives on their governing bodies are likely to be more sensitive to both community and employer needs than traditional technical colleges. The Commission is aware that some country technical colleges have advisory committees with local representatives, but considers that even if such committees were given greater powers, these could not include power over the staffing of the institutions and immediate control over the use of their resources, both of which are seen as essential if they are to be responsive to the local community and if decision making is to be decentralised.

(c) In addition, institutions with strong links to the local community are likely to be more conscious of opportunities for sharing resources and facilities with other local bodies such as high schools, local government authorities and offices of State Government departments, and for encouraging community use of institution facilities. The limited size and wide dispersion of the population in the Pilbara will limit the range of facilities and courses that both high schools and post secondary institutions will be able to provide. The sharing of resources between these two sectors of education will result in both sectors being able to provide a greater range of courses and facilities. It is also important that any new facilities which may be established in the Pilbara should be made readily available for community use. The Commission recognises that traditional technical colleges have a significant involvement with the community, largely through the provision of adult

education classes. However, there are a number of ways in which this involvement could be increased. As the Partridge Committee[8] suggests, the provision of one or two seminar or meeting rooms would provide a home for the activities of local cultural groups and for adult education classes. The sharing of library and other resources with local government authorities and schools could increase the availability of resources. The appointment of an adult education coordinator could improve the provision of adult education courses. The extension of college hours and freer access to facilities could lead to greatly increased community use of facilities both during the summer months and during other times of the year. While it might be possible for a traditional technical college to undertake these rather broader functions, the Commission believes that the opportunities for innovation and experimentation at technical colleges are limited because the colleges are all parts of a highly centralised State-wide system.

61. A second possibility would be the establishment of technical colleges administered by the Technical Education Division, but having governing councils appointed by the Minister and with such powers, responsibilities and functions as he might delegate to them. This would require the amendment of the Education Act and Regulations. Such a framework could provide for local participation in the government of colleges but would not necessarily lead to the colleges concerned becoming more involved with other sectors of post secondary education or facilitate their eventual development into multi-level community colleges with an increasing degree of local responsibility for their governance.

62. A third way of meeting the post secondary education needs of the Pilbara would be by the creation of colleges which are not under the control of the Technical Education Division. The Partridge Committee[9] advocated the establishment of community colleges in Western Australia and outlined the following common features that characterise the community college concept -

"(a) The college educational programme is clearly adapted to the needs of the community it serves. This implies some

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Footnote (8): Post-Secondary Education in Western Australia, p.111.

Footnote (9): *ibid.* p.109.

local share in the government of the college.

(b) There is an "open door" admission policy, although this does not mean that every course is open to every student.

(c) A highly developed counselling service is an essential component of the college.

(d) The curriculum of the college is comprehensive in the sense that it is capable of offering a wide range of courses at post-school level - academic courses at sub-tertiary level, para-professional and vocational training, adult education and remedial courses, cultural and hobby courses. Many American and Canadian colleges offer "transfer" courses to four-year colleges and universities.

(e) There is flexibility in attendance patterns to cope with the needs of part-time and evening students; day-release, block-release and sandwich courses can be offered to students from industry; and year-long teaching involves the use of weekends and vacations.

(f) Teaching is the prime function of the college staff, and teaching ability is emphasised in the systems of promotions and reward.

(g) The college is a centre for cultural and art groups in the community."

63. The Commission strongly endorses the community college concept as a means of meeting post secondary education needs in country areas and of enhancing opportunities for community involvement in cultural, artistic, and other leisure activities. However, the Commission believes that, given the present distribution of population in Western Australia, any post secondary education institution to be developed outside the Perth metropolitan area will need to have some association with other institutions and particularly with the Technical Education Division. As the Partridge Committee pointed out[10] -

(a) technical teaching staff now have the advantage of a State-wide promotional system, which would be denied to them if local autonomy were complete;

(b) the variety of technical and special services that are now available from the metropolitan base would be more difficult to organise if community colleges were not part of a State system; and

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Footnote (10): Post-Secondary Education in Western Australia, pp 111, 112

(c) the centres in Western Australia where community colleges are likely to develop are in general considerably less populous than those that support community colleges in North America.

Therefore local participation in the government of community colleges should be reinforced by the experience and expertise that can be made available State-wide from the metropolitan area.

64. Accordingly, the Commission recommends that the post secondary education needs of the Pilbara be met by the establishment of colleges at Karratha and Port Hedland which -

(a) provide, or facilitate the provision of, a wide range of educational, cultural and artistic programs at various levels;
(b) involve local participation in their governance;
(c) develop links with the Technical Education Division and with other post secondary education institutions; and
(d) are planned in such a way as to facilitate an increasing degree of responsibility for self-government.

65. The Commission believes that these colleges should be corporate bodies and should be quite independent of all other post secondary education institutions including the Technical Education Division. The colleges should be governed by councils appointed by the Minister for Education and these councils should be responsible for all of the colleges' activities. The Commission is aware that the establishment of colleges of the kind proposed for the Pilbara could have wide ranging implications for post secondary education in Western Australia. Residents of Albany, Bunbury, Geraldton and Kalgoorlie will be likely to press for a similar degree of involvement in the governance of the technical colleges located in their respective towns, and there may well be similar pressures for increased local participation in the governance of some institutions within the Perth metropolitan area. The role of the Technical Education Division will be altered significantly if these pressures result in a number of technical colleges being granted similar status to that proposed for the Pilbara colleges and such changes may also have implications for the operations of the Western Australian Post Secondary Education Commission. The Commission will need to give careful consideration to these implications before it considers recommending granting independent status to other colleges.

66. The establishment of small independent colleges in the Pilbara and perhaps in some other areas may necessitate some changes in the machinery that presently exists for coordinating the activities of post secondary education institutions. Small colleges could not be expected to have the same degree of expertise as larger institutions or to offer the same opportunities for staff to develop and progress through the promotion system. It may, at least in the short run, be necessary to provide them with some external assistance and, at the same time, to encourage them to cooperate with each other in a number of areas. Such assistance and coordination could possibly be provided by the proposed Technical Education Advisory Committee or by a committee of the Western Australian Post Secondary Education Commission. In any event, the Commission, in the process of performing its planning and coordinating functions, will consider recommendations either from the colleges or from any coordinating body which may be established, with respect to capital and recurrent budgets, the introduction of new courses and the overall development of the colleges.

67. While the Pilbara college councils should be responsible for all of the colleges' activities, the Commission is of the opinion that a number of functions which would normally fall within the province of the governing authority of an independent institution should be arranged through agreements between the colleges and the Technical Education Division and other appropriate organisations. In this way the colleges can draw on the experience and expertise of other institutions while at the same time retaining responsibility for their activities. The Commission would expect the colleges to make reasonable payment for services provided under such agreements and retain the right to renegotiate or terminate such agreements as considered appropriate. The types of services which the colleges might wish to obtain by agreement with other organisations are detailed later in this Report.

68. The Commission recognises that independent colleges may cost more than traditional technical colleges but believes that any additional costs will be minimal and that the benefits of local decision-making may lead to improved education services to the community. It is understood that the Technical Education Division believes that there is a need for major technical colleges at both Karratha and Port Hedland. The costs of planning and constructing independent colleges of the type proposed in this Report

are likely to be little different from the costs of constructing technical colleges. Operating costs are likely to be a little more as the colleges will have to provide some administrative functions normally charged against the Technical Education Division, and will also be engaged in a wider range of activities than technical colleges. It must be borne in mind, however, that the establishment of two technical colleges in the Pilbara would, in any case, have increased the administrative load of the Technical Education Division and would presumably have resulted in some increased administrative costs.

THE LEGISLATIVE FRAMEWORK

69. It will be necessary to introduce new legislation to provide a framework within which colleges of the kind proposed above can operate. The Commission would see such legislation enabling the Minister -
    (a) to establish colleges;
    (b) to specify the functions of each college;
    (c) to appoint college councils; and
    (d) to specify the powers and responsibilities of college councils.

70. Such legislation would allow for the establishment of colleges in the Pilbara and would also facilitate the establishment by the Minister of other colleges as the need arises. The Commission believes that the functions of colleges and the powers and responsibilities of college councils should not be regarded as static. The functions performed by colleges should change with population movements and with the growth and development of other institutions. The powers and responsibilities of the local communities for their colleges might increase as the colleges grow and as they develop more expertise. Any new legislation should, therefore, permit a flexible rearranging over time of the functions of colleges and the powers and responsibilities of college councils.

71. The Secretariat of the Commission is in the process of preparing proposals for legislation which will allow for the establishment of colleges along the lines detailed in paragraph 64. The following discussion of the characteristics of the proposed colleges assumes that such legislation will be enacted and endeavours to explain the types of powers and functions which would be delegated by the Minister under that legislation.

CHARACTERISTICS OF THE PROPOSED COLLEGES[11]

Scope

72. The Commission believes that the colleges proposed for Karratha and Port Hedland should be regional institutions with responsibility for the post secondary education needs of the corridors in which they are located. As mentioned previously, communication links within the two corridors are good and a college located on the coast should be able to make a substantial contribution to towns in the hinterland. In the present context these colleges will consist of a major campus which would serve as the administrative centre of the institution and would provide guidance and assistance to a number of branch campuses which may be established in the region. Given the present distribution of population, the branch campuses will be rather small operations using rented premises or high school or other accommodation and part time staff. They will serve a particularly valuable function, however, by acting as a base for visiting staff from the main campus, and by coordinating post secondary education activities within the immediate area.

Objectives

73. The Commission recommends that, with a view to promoting and encouraging the advancement of post secondary education and of cultural and leisure activities in their respective corridors, the colleges at Karratha and Port Hedland should -

(i) from their own resources, or by liaison with other bodies, provide ways of meeting the individual educational needs of persons who are beyond the usual age for full-time secondary education;

(ii) offer a range of educational, cultural and leisure programs and activities in localities within the Pilbara as determined by the particular circumstances of those localities;

(iii) offer -

Footnote (11): Some of the following characteristics are similar to, or based on, those outlined for a community college proposed in the Report of the New South Wales Ministry of Education Committee appointed to consider the development of community colleges in New South Wales with special reference to the Orana and New England regions. The Commission has found the Report's discussion of the characteristics of community colleges to be particularly useful.

(a) as wide a range as possible of vocational courses including those leading to trade, post-trade and middle level qualifications, and incorporating initial preparation, refresher and retraining programs;

(b) non-vocational adult education courses including a range of general and liberal studies and leisure activities;

(c) special courses designed to overcome particular educational deficiencies of students; and

(d) possibly a limited range of transfer courses in collaboration with other institutions;

(iv) provide assistance to persons seeking to undertake, or undertaking, courses through institutions outside the region; and

(v) provide assistance to individuals and organisations wishing to participate in or sponsor cultural and leisure activities.

Functions

74. The Commission recommends that, in the immediate future, the prime functions of the colleges at Karratha and Port Hedland should be -

(i) to develop facilities to provide for day release training for apprentices in the immediate vicinity of the colleges and intensive training for apprentices from surrounding areas;

(ii) to develop technical and further education courses in the science, engineering, management, business and commercial studies areas and perhaps some other vocational and post-trade areas;

(iii) to cooperate with high schools and employers in the provision of year 11 or year 12 terminal courses;

(iv) to develop pre-apprenticeship courses;

(v) to administer, provide and coordinate evening technical and further education classes in the region;

(vi) to coordinate Technical Extension Service correspondence studies programs and university and advanced education external studies programs in the region and to provide students with tutorial assistance through arrangements made with the Perth institutions;

(vii) to provide a focus for university and advanced education extension courses; and

(viii) to provide a focus for educational and cultural activities within the region.

Courses

75. The Commission sees the colleges offering a variety of courses in a number of different ways. The broad course areas with which the colleges will be involved may be categorised as follows -

(a) trade, technician and other professional and para-professional courses;
(b) adult education and other short courses;
(c) preparatory courses (e.g. matriculation, diploma entrance); and
(d) university and advanced education courses.

76. With respect to the trade, technician and other para-professional courses the Commission would expect the Technical Education Division to provide, under agreements with the colleges, professional advice on college programs. In addition, the colleges might wish the Technical Education Division to prescribe the curriculum for some courses, be responsible for assessment and perhaps certification, and possibly provide full-time staff to teach such courses. In any event, the Commission would expect the colleges and the Technical Education Division to consult with a view to facilitating the transfer of students between courses offered by the colleges and by the Division.

77. The Commission would expect the colleges to offer their own adult education courses and perhaps some other short courses, and make their own awards where appropriate.

78. The colleges might consider entering into agreements with appropriate high schools for the provision of preparatory courses or might prefer to offer a range of such courses themselves. Whatever the outcome, high school staff are likely to remain involved in teaching in this area.

79. The Commission would also expect the colleges to enter into agreements with universities and colleges of advanced education for the provision of appropriate courses. Initially, the colleges' involvement in this area is likely to be restricted to the provision of resources and facilities for external students and advice regarding courses. In the longer run, however, the colleges might act as affiliated colleges to the metropolitan institutions and either prepare students for examination and certification by these institutions or offer courses which are accepted for credit by these institutions.

Staffing

80. The Commission believes that the college councils should be responsible for the appointment of all staff. The colleges may, however, experience difficulties in obtaining all necessary staff and accordingly the Commission sees the colleges entering into agreements for the secondment of some staff from other institutions. It will, of course, be imperative for the metropolitan institutions and the Technical Education Division to cooperate with the Pilbara colleges in arranging the secondment of appropriate staff, and arrangements will have to be made for such staff to retain their rights and privileges.

81. Salary scales for institutions of this kind should be comparable with those applicable for institutions where similar work is done. However, special allowances may be required to attract staff to colleges which offer a limited range of programs and are situated in a relatively inhospitable area.

82. The Commission recognises that the establishment of independent colleges in the Pilbara will have significant implications flowing from the determination of salary and employment conditions for staff of these colleges. Arrangements for secondments with the retention of rights and privileges and the granting of special allowances may also create precedents. The determination of salaries and conditions will need to be handled carefully because of the sensitive nature of such matters and also because of possible implications for other organisations. The Commission believes that these sorts of issues need to be explored in depth and suggests how this might be done later in the Report.

83. The Commission sees the positions of principal of the Pilbara colleges as being of vital importance. Each principal will be an ex-officio member of his college council and will implement the decisions of the council. The Commission strongly endorses the following view which was expressed by the Partridge Committee -

> "We attach the greatest importance to the office of principal of such a college. The success of a college which has such a wide range of activities and which caters for people of diverse ages and abilities will depend in an essential way on the personality of the principal; on his imagination, drive and experience; and on his ability to establish the proper identity and working relationship with the local community. It has been pointed out to us that a present feature of the technical school system in the country is the relative impermanence of

> the teaching staff. The State-wide promotional ladder, coupled sometimes with problems of housing in country towns, has led in many cases to frequent changes in staff, including the office of principal, in country technical schools ..... We regard it as essential that the office of principal of a country comprehensive college be regarded as specific to the particular area, that it not form part of a State-wide promotional ladder, and that it be filled by open advertisement. With the absence of other promotional opportunities, the conditions of the position itself should be attractive enough to provide a career inducement to the appointee. It would be appropriate for the local school council or board to have a part in the selection process for the office of principal".(12)

84. The Commission believes that limited term appointments (of a minimum of three or four years) to the positions of principal and other senior positions might be appropriate and that the possibility of seconding persons from other institutions in the State should not be ruled out. In addition, applicants from within the Education Department of Western Australia should not be precluded from appointment to these positions and by agreement it could be possible to preserve the right of these persons to return to the Education Department in due course.

Other Services

85. In the short run, at least, the colleges at Karratha and Port Hedland will be looking to other institutions and organisations for assistance and advice in a number of areas in addition to courses and staffing. In this regard the colleges may enter into agreements with respect to services such as the following -

(a) the planning and administration of capital works programs;
(b) the purchasing of some items of equipment;
(c) the development of administrative and accounting systems;
(d) the ordering and cataloguing of books;
(e) the provision of courses and other activities for staff development;
(f) the provision of professional support for guidance and counselling officers;
(g) the provision of central personnel functions; and
(h) the provision of curriculum and other resource material.

Footnote (12): Post Secondary Education in Western Australia, p. 111

86. The Commission is of the view that the colleges should enter into agreements to buy services of this kind from the most appropriate source. It also believes that in the long run the colleges will be able to undertake a number of these types of functions for themselves as their expertise and experience increases.

Funding

87. The establishment of colleges in the Pilbara will provide the opportunity for some experimentation with regard to financing. Although the major part of the colleges' activities will be in the TAFE area, and will be financed basically by the State, some of their activities will be in other sectors of post secondary education. The financing of these activities will be a matter which will require negotiations with the Commonwealth Tertiary Education Commission.

88. The Commission believes that, to be effective, the college councils must have control over college funds. Accordingly, it is of the view that, subject to the recommendation of the Western Australian Post Secondary Education Commission regarding the level of funding appropriate for each college, the Government should provide annually to the colleges recurrent funds to enable them to -

(i) conduct courses including short courses and adult education/ community education activities;
(ii) appoint staff;
(iii) meet costs of administration, materials and equipment;
(iv) pay other institutions and organisations for various kinds of services;
(v) maintain the college sites and buildings;
(vi) rent teaching and allied accommodation as required; and
(vii) provide for staff development.

Constitution of the Councils

89. The composition of the college councils will, of course, be critical to their success. The Commission believes that the principal of each college should be an ex-officio member of the respective council but should not act as Chairman. The remaining membership of the councils needs to be determined so that their overall composition reflects regional interests and enables adequate membership for the major centres of the region. At the same time

the size of the councils should not be so large as to make them non-working bodies. For these reasons the Commission proposes a council of not more than 16 members.

90. The Commission proposes that an independent Chairman be appointed and that six members of each council be drawn from persons with background and experience in the vocational and other fields of study which the colleges will be serving. These members might well be drawn from among men and women involved in, for example:

- . mining
- . engineering
- . primary production
- . building
- . commerce and professional life
- . local government and public administration
- . home-making
- . education.
- . cultural and recreational activities

91. The Commission believes that staff membership of a governing body is desirable and accords with modern practice. Accordingly, it suggests that two of the members of the councils appointed by the Minister should be staff members elected by the full-time staff (teaching and other) of the respective colleges.

92. The Commission also sees it essential for these institutions to have Education Department representation on the college councils and suggests that the Director-General of Education nominate one member.

93. In addition to these members, the Commission suggests that three places be retained for cooption by the other members of the Council themselves. This would enable the appointment of appropriate persons if it should become obvious to the council that its deliberations would be aided by the addition of a member drawn from a particular area of interest or expertise.

Powers and Functions of the Councils

94. The Commission recommends that, in order to perform the various functions outlined in earlier paragraphs, the councils of the colleges at Karratha and Port Hedland each have the following powers and functions -

(i) subject to the following paragraphs, to be responsible for the conduct of courses and other educational activities of the college;

(ii) to identify and coordinate the need for vocational courses within the region;

(iii) to negotiate and enter into agreements with the Technical Education Division for the provision of those courses considered appropriate and the necessary staffing and services to ensure that teaching meets requirements laid down in various Government Acts and regulations for Technical Education Division qualifications;

(iv) In the cases of minor and short vocational courses and those for which questions of State-wide certification do not arise, to -

(a) approve the introduction, revision or withdrawal of such courses at the major campus of the college and at branch campuses within the region, subject to the availability of funds for additional staff, equipment and materials;

(b) arrange for appropriate assessment of courses approved by the council; and

(c) confer in its own name the award of an appropriate document on persons who have satisfactorily completed courses approved by the council;

(v) to monitor adult education needs in the region, encourage adult education provision by various bodies and agencies within the region and beyond, and facilitate coordination of adult education programs throughout the region;

(vi) to be responsible for the control of all non-vocational adult educational provisions of the college, for the making of new provisions within the funds available to the council and for the coordination of the college's activities in adult education with other provisions in the region;

(vii) to set fees for the adult education courses offered by the college and be responsible for the disbursement within the college of the moneys obtained therefrom;

(viii) to negotiate and enter into agreements with other educational bodies and institutions on the matter of transfer and other courses, provided that any agreement which involves the college in the

provision of additional staff or facilities should first have the concurrence of the Western Australian Post Secondary Education Commission;

(ix) to appoint staff either by direct appointment by the council or by agreement with other institutions;

(x) to provide relevant staff development programs for staff of the college;

(xi) to be responsible for the management and construction of college buildings and to authorise expenditure on works and maintenance of these from within the budget available to the college;

(xii) to advise the Minister and the Western Australian Post Secondary Education Commission on the programs for new building works, and major additions and alterations within the college;

(xiii) to undertake leasing agreements for college accommodation within the funds available to the council;

(xiv) to encourage community use of college facilities (including the provision of facilities for local groups and societies), to establish guidelines for the approval of such use, to set appropriate charges for use, and to disburse this income for the purposes of the college;

(xv) to be responsible for the management of student residentials, to set fees for these residentials and to disburse this income in their running;

(xvi) to advise the Minister and the Western Australian Post Secondary Education Commission of the college's needs for major plant and equipment;

(xvii) to authorise expenditure on equipment from within the budget available to the college;

(xviii) to prepare annual submissions on the recurrent funds required by the college for transmission to the Minister and the Western Australian Post Secondary Education Commission;

(xix) to determine an annual budget for the college from the recurrent funds received from the Government and from all other sources, and to make allocations within that budget for recurrent funds for branch campuses of the college;

(xx) to negotiate and enter into agreements for the provision of such other services as may be appropriate from time to time;

(xxi) to establish committees for the council's own administrative and educational purposes as it requires, such committees being able to include persons who are not members of the council;

(xxii) to establish committees in association with branch campuses of the college and to delegate to each such committee power to authorise expenditure within the budget of the branch campuses;

(xxiii) to accept and administer funds provided by other organisations for the provision of educational opportunities;

(xxiv) to accept and administer gifts and bequests on the terms and conditions indicated by the donors; and

(xxv) to provide for an annual audit of the finances of the college as required.

The Nature of the Physical Facilities to be Provided

95. Of prime importance is the nature of the facilities to be provided at Karratha and Port Hedland. The Commission recommends that, in the first instance, the facilities should comprise offices, administration areas, classrooms, fitting and machining, electrical, automotive and metal construction workshops, a library/resource centre, a cafeteria and toilet facilities. Because of the nature of the climate in the Pilbara, some of these facilities will need to be air conditioned. There will be instances where the two colleges will be able to share facilities with other groups such as high schools and shires and the Commission believes that the possibilities of sharing should be investigated where possible. The Commission understands that some of the companies in the area may be prepared to allow the use of some facilities on a shared basis. These possibilities should be fully explored by the colleges with a view to developing links with industry and reducing the need for expensive equipment. However, the company workshops at apprentice training centres which are either in existence or are planned for the future in no way reduce the need for workshops associated with the post secondary education institutions. The Commission understands that the apprentice training workshops which the larger companies have established are designed to supplement the training apprentices receive on the job or in technical colleges. It has been suggested to the Commission that the post secondary education needs of the Pilbara could be met by the provision of a limited amount of temporary accommodation. The Commission strongly opposes this suggestion. The Pilbara is a developing area which has an assured future and its needs warrant the provision of facilities at least as good as those provided in other areas of Western Australia.

96. While the facilities listed in paragraph 95 above are the first priority, the Committee also believes that, at least in the long run, the physical facilities at the colleges at Karratha and Port Hedland should include some cultural and recreational amenities for students and for the community at large. Such facilities could be used by local groups, and also as display venues for touring collections of arts and crafts and as performance venues for touring performing arts groups.

Residential Accommodation

97. Due to the nature of the various towns involved and the relative shortage of rental accommodation, it will be essential for residential accommodation for 30 or so students to be available at both Karratha and Port Hedland to facilitate the provision of pre-apprenticeship courses, intensive and/or block release training courses for apprentices and short courses and seminars for students taking other courses at the colleges concerned or through correspondence or external study.

98. The Commission has approached Mt Newman Mining and Hamersley Iron to see whether, as an interim measure, they would be prepared to make residential accommodation available for students wishing to attend the college in their area. The companies' response to this approach indicates that some limited accommodation will be available at least in the short run.

99. The Commission believes it would not be feasible to attempt to utilise Hardie House, the hostel associated with Port Hedland Senior High School, as a residence for both high school and post secondary education students because of the disparate ages, attitudes and incomes of the two groups.

100. There will also be a need for residential accommodation for the staff of the two colleges and the Commission suggests that discussions take place with the Government Employees' Housing Authority on this matter.

Sites

101. In order to allow for future post secondary education developments in the Pilbara the Commission recommends that the colleges proposed for Karratha and Port Hedland should be located on sites of about 20 hectares. It would also be desirable for the sites to be close to the commercial and shopping centres of the towns concerned in order to encourage community participation and involvement.

102. The Commission has examined a site in Karratha which has been earmarked for a technical college. In the Commission's opinion the site is too small and too rocky. It is also too far removed from the centre of building activities in Karratha and is separated from the existing residential cells by a major road. The Commission favoured a site within the "education belt" which had been identified in Karratha. The location of a college in the "education belt" would have increased opportunities for sharing resources and make the institution more accessible to people living in the Karratha area. However the Commission has been informed that due to technical problems associated with soil and drainage conditions, the third cell of residential development has had to be relocated in such a way as to absorb the proposed education belt. This relocation casts doubts on the availability of the land preferred by the Commission. Further investigation of suitable sites is being undertaken.

103. The Commission understands that a number of sites have been discussed for a technical college in Port Hedland. One site is apparently in an area which is rather isolated at present but will eventually become a centre for recreational activity. The other site is adjacent to the Pundulmurra Vocational Training Centre and the Port Hedland Senior High School. While the latter site has some attractions from the point of view of encouraging the sharing of resources among the three institutions, the Commission is of the view that both sites are too far removed from what will become the centre of South Hedland and are too small. The Commission believes that there is a need for a site of about 20 hectares located close to the centre of South Hedland.

Implementation

104. The Commission is of the view that the post secondary education needs of the Pilbara are such that planning should commence with a view to enrolling students at Karratha and Port Hedland as soon as possible. In this regard the Commission recommends that the Minister appoint an Interim Planning Committee for each college to prepare reports and recommendations to be submitted to him through the Western Australian Post Secondary Education Commission. Pending the appointment of an Interim Council and senior staff for each college, the Interim Planning Committees' tasks will be -

(a) to develop the educational specifications for each of the new colleges;

(b) to take the necessary steps to ensure the appointment by 1 January, 1979 of a Principal and such other senior academic staff as are appropriate;

(c) to identify common tasks and to cooperate with other colleges in such matters as developing links with the Education Department and other post secondary education institutions which will ultimately lead to the establishment of agreements by the Council with those bodies for the provision of academic and administrative services; and

(d) to prepare submissions for capital and recurrent funds for the period 1978/79 and beyond.

105. The Commission believes that the Interim Planning Committees should be small and recommends -

(a) that the membership of each Interim Planning Committee consist of:

(i) a representative of the Western Australian Post Secondary Education Commission;

(ii) a representative of the State Education Department; and

(iii) a local representative from Karratha/Port Hedland; and

(b) that the Interim Planning Committees have power to coopt individuals with relevant expertise from the various institutions and authorities on a consultative basis when the need arises.

106. The Commission also believes that it will be necessary at an early date to provide some form of administrative assistance for the Interim Planning Committees and for the principals.

THE NATURE OF THE APPRENTICESHIP SYSTEM

107. Some of the submissions to the Commission have advocated a review of the apprenticeship system on the grounds that the existing system -

(a) is not providing sufficient skilled tradesmen and that this will cause severe manpower shortages in the future, particularly if the North-West Shelf gas project goes ahead; and

(b) is out of step with trends in other countries, is inefficient and is wasteful of the apprentices' time.

108. One of the submissions discussed this matter in detail and recommended a reduction in the term of apprenticeships to four or possibly three years, a reduction in on-the-job training for apprentices, and an increasing responsibility for the technical education system in the training of apprentices.

109. The Commission is also aware of the existence of a number of special adult trade training schemes which allow adult trainees to obtain trade certificates in less than three years, and understands that some interests

have suggested that these schemes be extended to the Pilbara.

110. These suggestions raise wide ranging questions which extend beyond the brief of this Commission. The Commission believes, however, that these issues need to be considered and accordingly recommends that action be taken by the two Ministries involved to ensure that the Industrial Training Advisory Council discusses with interested parties in the Pilbara the desirability or otherwise of introducing major structural changes to the apprenticeship training system to make it more suitable for the Pilbara.

SUMMARY OF RECOMMENDATIONS

111. The Commission recommends to the Minister -

(a) That the post secondary education needs of the Pilbara be met by the establishment of colleges at Karratha and Port Hedland which -

(i) provide, or facilitate the provision of, a wide range of educational, cultural and artistic programs at various levels;

(ii) involve local participation in their governance;

(iii) develop links with the Technical Education Division and with other post secondary education institutions; and

(iv) are planned in such a way as to facilitate an increasing degree of responsibility for self government.

(b) That legislation enabling the Minister to establish colleges be drawn up along the lines suggested in paragraphs 69 and 70 of this Report.

(c) That the colleges at Karratha and Port Hedland be regional institutions with responsibility for the post secondary education needs of the corridors in which they are located.

(d) That with a view to promoting and encouraging the advancement of post secondary education and of cultural and leisure activities in their respective corridors, the colleges at Karratha and Port Hedland should have the objectives listed in paragraph 73.

(e) That in the immediate future the prime functions of the colleges at Karratha and Port Hedland should be -

(i) to develop facilities to provide for day release training for apprentices in the immediate vicinity of the colleges and intensive training for apprentices from surrounding areas;

(ii) to develop technical and further education courses in the science, engineering, management, business and commercial studies areas and perhaps some other vocational and post-trade areas;

(iii) to cooperate with high schools and employers in the provision of year 11 or year 12 terminal courses;

(iv) to develop pre-apprenticeship courses;

(v) to administer, provide and coordinate evening technical and further education classes in the region;

(vi) to coordinate Technical Extension Service correspondence studies programs and university and advanced education external studies programs in the region and to provide students with tutorial assistance through arrangements made with the Perth institutions;

(vii) to provide a focus for university and advanced education extension courses; and

(viii) to provide a focus for educational and cultural activities within the region.

(f) That the colleges at Karratha and Port Hedland be -

(i) bodies corporate;

(ii) independent of other post secondary education institutions; and

(iii) governed by councils appointed by the Minister.

(g) That the council of each of the colleges at Karratha and Port Hedland consist of -

(i) A chairman.

(ii) The college principal.

(iii) Six members drawn from persons with background and experience in the vocational and other fields of study which the college will be serving.

(iv) Two staff members elected by the full time staff.

(v) A nominee of the Director-General of Education.

(vi) Three members coopted by the members referred to in sub-paragraphs (i) to (v) above.

(h) That the councils of the colleges at Karratha and Port Hedland each have the powers and functions detailed in paragraph 94.

(i) That, in the first instance, the facilities to be provided at Karratha

and Port Hedland include offices, administration areas, classrooms, fitting and machining, electrical, automotive, and metal construction workshops, a library/resource centre, a cafeteria and toilet facilities.

(j) That the colleges proposed for Karratha and Port Hedland be located on sites of about 20 hectares close to the commercial and shopping centres of the towns concerned.

(k) That the Minister appoint an Interim Planning Committee for each college to prepare reports and recommendations to be submitted to him through the Western Australian Post Secondary Education Commission and that, pending the appointment of an Interim Council and senior staff for each college, the Interim Planning Committees' tasks will be -

(i) to develop the educational specifications for each of the new colleges;

(ii) to take the necessary steps to ensure the appointment by 1 January, 1979 of a Principal and such other senior academic staff as are appropriate;

(iii) to identify common tasks and to cooperate with other colleges in such matters as developing links with the Education Department and other post secondary education institutions which will ultimately lead to the establishment of agreements by the Council with those bodies for the provision of academic and administrative services; and

(iv) to prepare submissions for capital and recurrent funds for the period 1978/79 and beyond.

(l) That membership of each Interim Planning Committee consist of -

(i) a representative of the Western Australian Post Secondary Education Commission;

(ii) a representative of the State Education Department; and

(iii) a local representative from Karratha/Port Hedland.

(m) That the Interim Planning Committees have power to coopt individuals with relevant expertise from the various institutions and authorities on a consultative basis when the need arises.

(n) that action be taken by the two Ministries concerned to ensure that the Industrial Training Advisory Council discusses with interested parties in the Pilbara the desirability or otherwise of introducing major structural changes to the apprenticeship training system to make it more suitable for the Pilbara. 78

APPENDIX A

SUBMISSIONS

The Commission has received a considerable number of submissions relating to the provision of post secondary education in country areas and the development of community colleges and/or multi-level institutions. In addition, submissions containing specific suggestions regarding the provision of post secondary education in the Pilbara region have been received from the following -

Individuals

Bant, C.P.	Regional Superintendent of Education, Port Hedland.
Jones, Dr I.O.	Dean, School of Mining and Mineral Technology, WA Institute of Technology.
Milne, N.	Academic Registrar, WA Institute of Technology.

Organisations

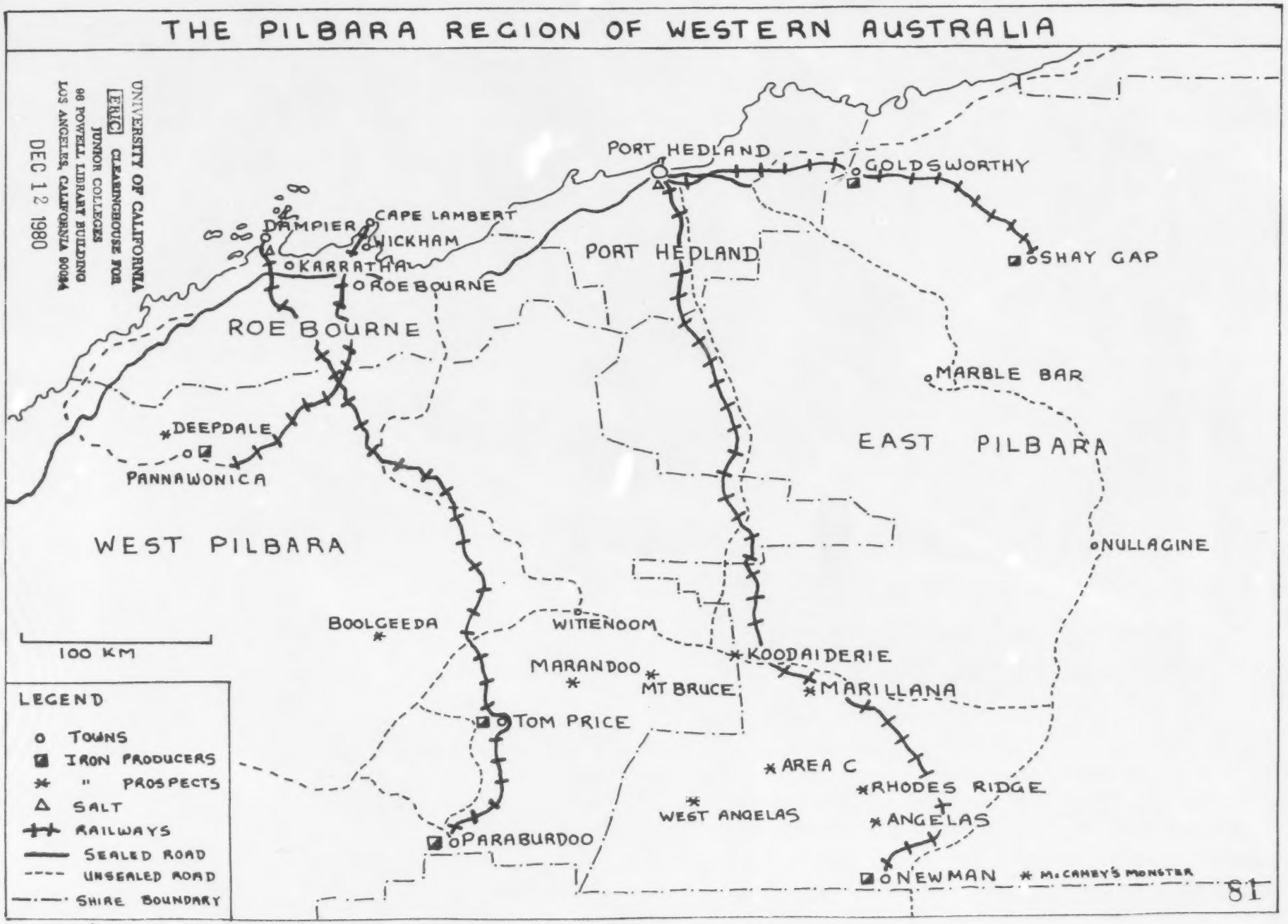
Chamber of Mines of WA (Inc.).

Mount Newman Mining Co. Pty. Limited.

Pilbara Regional Development Committee.

Technical Education Division. Education Department of WA.

WA Institute of Technology.



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